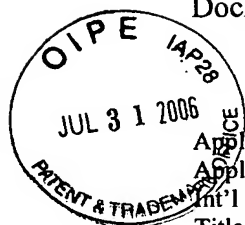


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Stephan Ludwig, et al.
 Application No.: 10/550,856
 Int'l filing Date: 03/24/2004
 Title: CASPASE INHIBITORS, ESPECIALLY CASPASE 3 INHIBITORS, FOR THE TREATMENT OF INFLUENZA
 Examiner: Unassigned
 Group Art: Unassigned
 Confirmation No.: 6403
 Docket: 7003/45

INFORMATION DISCLOSURE STATEMENT (IDS)

MAIL STOP AMENDMENT

Commissioner For Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

SIR:

In accordance with 37 C.F.R. §1.56 and in compliance with 37 C.F.R. §§1.97 and 1.98, the references listed on attached Form PTO/SB/08 and/or subsequently identified herein, are being submitted herewith for consideration by the United States Patent and Trademark Office.

I. COPIES

- a. ☒ A legible copy of (i) each foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed, is included herewith.
- b. ☐ Any patents, publications or other information which are listed on PTO/SB/08 which are not enclosed herewith were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. §120:

U.S. Serial NumberU.S. Filing DateII. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

- a. ☐ Except as may be indicated below in (b) of this section, all of the patents, publications or other information are in the English language (concise explanation not required).
- b. ☐ A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows:
- c. ☐ The following additional information is provided for the Examiner's consideration:

III. ☐ CROSS REFERENCE TO RELATED APPLICATION(S)

The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this (these) applications to the Examiner's attention, Applicant(s) does (do) not waive the confidentiality provisions of 35 U.S.C. §122.

Serial No.Filing DateArt Unit

FEES

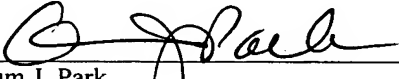
- IV. ☒ **THIS IDS IS BEING FILED UNDER 37 C.F.R. §1.97(b):** (check one box)
- a. ☐ within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. §1.97(b)(1)). No fee or statement is required.
 - b. ☐ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. §1.97(b)(2)). No fee or statement is required.
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- a. ☐ No statement; therefore, charge deposit account 50-1047 the fee set forth in 37 C.F.R. §1.17(p).
 - b. ☐ See the statement below. No fee is required.
- VI. ☐ **THIS IDS IS BEING FILED UNDER 37 C.F.R. §1.97(d):**
on or before payment of the issue fee and is accompanied by the following:
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 - 2) charge deposit account 50-1047 the petition fee set forth in §1.17(p).
- VII. ☐ **STATEMENT UNDER 37 C.F.R. §1.97(e)** (check only one box, if applicable)
The undersigned hereby states that
- a. ☐ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of IDS; or
 - b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application, and to knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement, or
 - c. ☐ some of the items of information contained in the IDS were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement.
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- ☐ A check in the amount of _____ is enclosed for the above-identified fee(s).
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 - ☒ If Applicant has overlooked any additional fees, or if any overpayment has been made, the Commissioner is hereby authorized to credit or debit Deposit Account 50-1047.
 - ☐ Two Copies of this paper are attached for Deposit Account charges and debits.

It is Applicant(s)' opinion that the claims presently on file patently distinguish the present invention from each of these references. The above references are being cited only in the interests of candor and without any admission that they constitute statutory prior art or contain matter which anticipates the invention or which would render the same obvious, either singly or in a combination, to a person of ordinary skill in the art.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 50-1047.

Respectfully submitted,
Mayer & Williams PC

Mayer & Williams PC
Customer Number 27774


Keum J. Park
Attorney for Applicant
Reg. No. 42,059
Tel. 908-518-7700

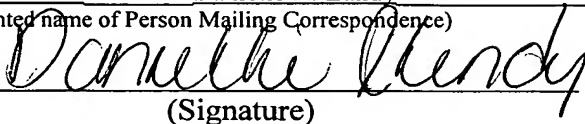
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(Printed name of Person Mailing Correspondence)


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Substitute for form 1449A/PTO JUL 3 1 2006 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		<i>Complete if Known</i>	
		Application Number	10/550,856
		Int'l Filing Date	03/24/2004
		First Named Inventor	Stephen Ludwig, et al.
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
		Attorney Docket Number	7003/45
Sheet	1	of	4

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Issue Date MM-DD-YYYY
		Number	Class/Subclass		

Exam iner Initial s*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T
		Office ³	Number Class/ Subclass			

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	1.	HEIKE FESQ, et al., "Programmed Cell Death (Apoptosis) in Human Monocytes Infected by Influenza A Virus, <i>Immunobiol.</i> , 1994, vol. 190, pp. 175-182.		
	2.	ISAMU MORI, et al., " <i>In Vivo</i> Induction of Apoptosis by Influenza Virus", <i>Journal of General Virology</i> , 1995, vol. 76, pp. 2869-2873.		
	3.	TAKENORI TAKIZAWA, et. al., "Induction of Programmed Cell Death (Apoptosis) by Influenza Virus Infection In Tissue Culture Cells", <i>Journal of General Virology</i> , 1993, vol. 74, pp. 2347-2355.		

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	4.	HANA VAN CAMPEN, et al., "Virulent Avian Influenza A Viruses: Their Effect on Avian Lymphocytes and Macrophages <i>in vivo</i> and <i>in vitro</i> ", <i>J. Gen. Virol.</i> , 1989, vol. 70, pp. 2887-2895.	
	5.	HANA VAN CAMPEN, et al., "Destruction of Lymphocytes by a Virulent Avian Influenza A Viruses", <i>J. Gen. Virol.</i> , 1989, vol. 70, pp. 467-472.	
	6.	LARISA V. GUBAREVA, et al., "Evidence for Zanamivir Resistance in an Immunocompromised Child Infected with Influenza B Virus", <i>The Journal of Infectious Diseases</i> , 1998, vol. 178, pp. 1257-1262.	
	7.	C. SCHOLTISSEK, et al., "Failure to Obtain Drug-Resistant Variants of Influenza Virus After Treatment with Inhibiting Doses of 3-Deazaadenosine and H7", <i>Archives of Virology</i> , 1991, vol. 119, pp.111-118.	
	8.	PHILLIP D. ZAMORE, et al., "RNAi: Double-Stranded RNA Directs the ATP-Dependent Cleavage of mRNA at 21 to 23 Nucleotide Intervals", <i>Cell</i> , March 31, 2000, vol. 101, pp. 25-33.	
	9.	YUICHI WATANABE, et al., "Role of Phosphatidylserine Exposure and Sugar Chain Desialylation at the Surface of Influenza Virus-Infected Cells in Efficient Phagocytosis by Macrophages", <i>The Journal of Biological Chemistry</i> , Issue of May 17, 2002, vol. 277, no. 20, pp. 18222-18228.	
	10.	THOMAS TUSCHL, et al., Targeted mRNA Degradation by Double Stranded RNA in Vitro, downloaded from www.genesdev.org on April 13, 2006, pp. 3190-3197.	
	11.	TERRANCE M. TUMPEY, et al., "Depletion of Lymphocytes and Diminished Cytokine Production in Mice Infected with a Highly Virulent Influenza A (H5N1) Virus Isolated from Humans", <i>Journal of Virology</i> , July 2000, vol. 74, no. 13, pp. 6105-6116.	

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Sheet	3	of	4	Attorney Docket Number	7003/45

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	12.	NANCY A. THORNBERRY, et al., "Caspases: Enemies Within", <i>Science</i> , August 28, 1998, vol. 281, pp. 1312-1316.	
	13.	MUNEESH TEWARI, et al., "Yama/CPP32 β , a Mammalian Homolog of CED-3, is a CrmA-Inhibitable Protease that Cleaves the Death Substrate Poly(ADP-Ribose) Polymerase", <i>Cell</i> , June 2, 1995, vol. 81, pp. 801-809.	
	14.	STEPHAN PLESCHKA, et al., "A Plasmid-Based Reverse Genetics System for Influenza A Virus", <i>Journal of Virology</i> , June 1996, pp. 4188-4192.	
	15.	STEPHAN PLESCHKA, et al., Influenza Virus Propagation is Impaired by Inhibition of the Raf/MEK/ERK Signalling Cascade", <i>Nature Cell Biology</i> , March 2001, vol. 3, 7 pages.	
	16.	CHRISTOPHER W. OLSEN, et al., "bcl-2 Alters Influenza Virus Yield, Spread, and Hemagglutinin Glycosylation", <i>Journal of Virology</i> , January 1996, vol. 70, no.1, pp. 663-666.	
	17.	ROBERT E. O'NEILL, et al., "The Influenza Virus NEP (NS2 Protein) Mediates the Nuclear Export of Viral Ribonucleoproteins", <i>The EMBO Journal</i> , 1998, vol.17, no. 1, pp. 288-296.	
	18.	STEPHEN LUDWIG, et al., "Influenza Virus-Induced AP-1-Dependent Gene Expression Requires Activation of the JNK Signaling Pathway", <i>The Journal of Biological Chemistry</i> , vol. 276, no.14, issue of April 6, 2001, pp. 10990-10998.	
	19.	STEPHEN LUDWIG, et al., "Influenza A Virus NS1 Protein Inhibits Activation of Jun N-Terminal Kinase and AP-1 Transcription Factors", <i>Journal of Virology</i> , vol. 76, no. 21, Nov. 2002, pp. 11166-11171.	

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	20.	REINER U. JÄNICKE, et al., "Caspase-3 is Required for DNA Fragmentation and Morphological Changes Associated with Apoptosis", <i>The Journal of Biological Chemistry</i> , vol. 273, no.16, issue of April 17, 1998, pp. 9357-9360.		
	21.	VIRGINIA S. HINSHAW, et al., "Apoptosis: A Mechanism of Cell Killing by Influenza A and B Viruses", <i>Journal of Virology</i> , vol. 68, no. 6, June 1994, pp. 3667-3673.		
	22.	LAVINA FALEIRO, et al., "Caspases Disrupt the Nuclear-Cytoplasmic Barrier", <i>The Journal of Cell Biology</i> , vol. 151, no. 5, November 27, 2000, pp. 951-959.		
	23.	QUINN L. DEVERAUX, et al., "X-Linked IAP is a Direct Inhibitor of Cell-Death Proteases", <i>Nature</i> , vol. 388, July 17, 1997, pp. 300-304.		
	24.	GERALD M. COHEN, "Caspases: The Executioners of Apoptosis", <i>Biochem J.</i> , 1997, vol. 326, pp. 1-16.		
	25.	WEISAN CHEN, et al., "A Novel Influenza A Virus Mitochondrial Protein That Induces Cell Death", <i>Nature Medicine</i> , December 2001, vol. 7, no.12, pp. 1306-1312.		
	26.	THIJN R. BRUMMELKAMP, et al., "A System for Stable Expression of Short Interfering RNA's in Mammalian Cells", <i>Science</i> , April 19, 2002, vol. 296, pp. 550-553.		
	27.	SIDDHARTH BALACHANDRAN, et al., "Alpha/Beta Interferons Potentiate Virus-Induced Apoptosis Through Activation of the FADD/Caspase-8 Death Signaling Pathway", <i>Journal of Virology</i> , February 2000, pp. 1513-1523.		

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